

# Virginia 811 Update

Passion to Serve, Dedication to Safety











Dig With 🖸 🖸 🖸

20+ Years

1976

The toll free number 800-552-7001 is established and still continues to serve as a working phone number today

#### 1979

The original Underground Utility Damage Prevention Act is passed by the Virginia General Assembly

#### 2001

Founder and former CEO Rick Pevarski creates VUPS as a Griecall notification services startup organization for the Commonwealth of Virginia

#### 2002

July 1st, VUPS Damage Prevention Specialists begin fielding calls statewide, with the exception of NOVA.

#### 2003

VUPS expands to include Northern Virginia to service the entire state of Virginia











#### 2005

In March, 8-1-1 becomes the universal Call Before You Dig number to make location of underground public utilities moreconvenient nationwide to plan excavation

#### 2006

VUPS logo update that includes the web address and highlights more public awareness of.... the organization as an industry resource

#### 2007

CGA and its member community launch à nationwide campaign to promote 811 as a universal number to call before you dig

**VUPS** releases Newtin ticket entry that provides more dynamic ticket entry and advanced mapping software.

#### 2009

New VUPS logo is introduced that incorporates the official VA811.com website address



### 2011

VA811 premieres their current VA811.com logo combining name, website and Dig with CARE messaging for improved brand awareness



Release of the H5 Ticket entry software allowing users to view maps, locations, and excavation descriptions simultaneously for improved ticket accuracy.



August dedication

and ribbon-cutting

ceremony for the new Communications

Center housing

Roanoke's VA811

Contact and E-911

Center

# 2020

B. Scott Crawford

is named

President and CEO

of VA811

in July

The Virginia 811 Academy is launched offering a variety of online training courses giving partners the ability to train

#### 2021

Serving Virginia



Christy Hale























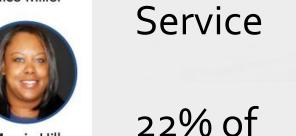




















Current Team!











# KERRY BRADLEY

#### GOLDEN SHOVEL AWARD FOR 2022

Kerry Bradley has been with Virginia 811 since January 31, 2011, and has worked in various areas within the Operations department including assisting Member Services and working a hybrid shift that spanned from normal business hours to after-hours. The after-hours duties included fielding Help Desk calls, processing Emergency and Three-Hour Notice tickets, completing Single Address Tickets (SAT) and auditing Web Ticket Entry (WTE) tickets to assist the Quality Assurance/Quality Control team. Kerry was promoted to an Operations Supervisor as of August 1, 2022.



Kerry volunteered to lead a team engagement group to encourage interaction with team members in a remote, teleworking environment to keep everyone connected and having fun. As part of this program, she communicates via "Team Chat" and is always posting fun tips, jokes, or nuggets of knowledge while encouraging her teammates.

Additionally, Kerry was instrumental in training the entire DPS and Operations teams on Office@ Hand. She was working on President's Day and had the opportunity to take the lead on the Office@Hand implementation. She communicated clearly with the Operations supervisor team to ensure they knew of the important details along the way.

Kerry brings great energy to everything she does.

She does an amazing job of encouraging and engaging our team by promoting an open line of communication that helps us feel better connected.



#### 12 Years Service!

#### **VIRGINIA 811 WELCOMES**



# Brian Morehouse Education and Marketing Supervisor

Brian Morehouse started at Virginia 811 on August 1st as the Education and Marketing Supervisor. In his new position, Brian will focus on creating more engagement opportunities and building strong community involvement throughout the state.

"We're so excited to have Brian on our team!" commented Scott Crawford, President & CEO of Virginia 811. "His knowledge of our industry and experience locating underground utilities and liaison work for an 811 center, make him a perfect fit for Virginia 811. He will be instrumental in overseeing a key part of Virginia 811's mission to improve our public awareness, education, and marketing areas."

Brian was raised in the eastern part of Virginia, living in Newport News and Gloucester, Virginia before making the move down to North Carolina. His career began at Newport News Shipbuilding, but he wanted to get into the utility business and was hired by Virginia Power in the early 90's. After starting off in their construction department, Brian moved into Electrical Design and finished the Dominion Energy Electrical Design program in 2000. In 2007 he transferred to the Electrical Co-op world in North Carolina by joining EnergyUnited in their design department. After gaining more experience, he began overseeing the fiber installation for that organization.

After more than 25 years in the utility business, Brian worked with AECOM with the contract with VDOT at the Hampton Roads Bridge Tunnel and Monitor-Merrimac Memorial Bridge Tunnel.

In 2018, he joined North Carolina 811 as an Education Liaison in the western region of NC. With experience in the utility business, Brian hit the ground running and soon began overseeing their sports marketing efforts along with developing innovative educational and marketing programs.

Brian is a graduate of both Rappahannock Community College and the Dominion Energy Project Designer Training Program. He is also actively involved in the racing industry with the NASCAR Touring Series where he has served as a Field Investigator/ Safety Inspector for the past 16 seasons. He is married to Dr. Audra Cave Morehouse and has two children attending college in North Carolina.

We are excited to have Brian join our team and are looking forward to the wealth of knowledge he will bring to Virginia 811. Welcome aboard Brian!





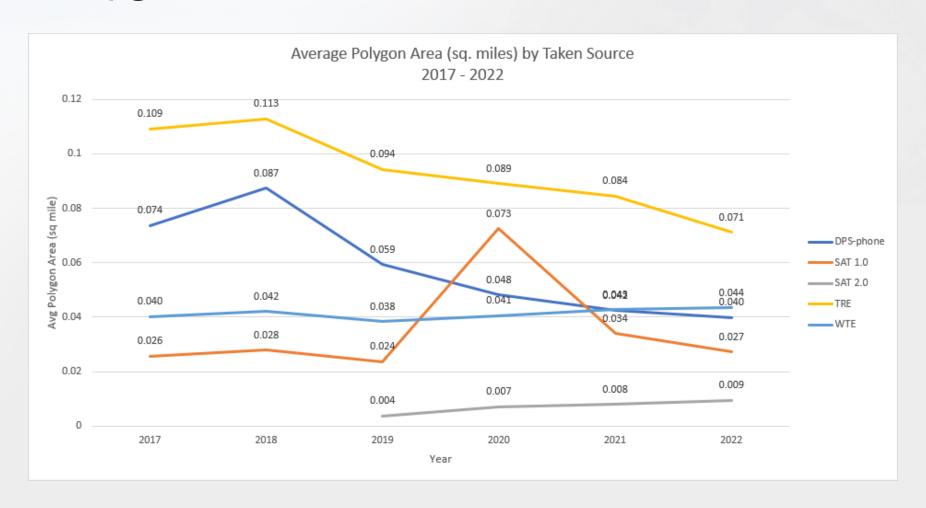


#### 2022 in Review

- Processed 1,537,469 tickets, down 3.4% relative to 2021, but 2.1% over 2020
- Transmission to Ticket Ratio = 5.53
  - Up 1.4% from 2021 (5.47)
    - "Over Notification" in regard to Polygon Size?
    - Better member mapping?
    - More utilities in the ground?



# Polygon Size, 2017-2022





# Polygon Size, 2017-2022

year	avg polygon size (sq. miles)	% change
2017	0.05808	
2018	0.06474	11.47%
2019	0.04966	-23.29%
2020	0.04681	-5.74%
2021	0.04328	-7.54%
2022	0.04169	-3.67%

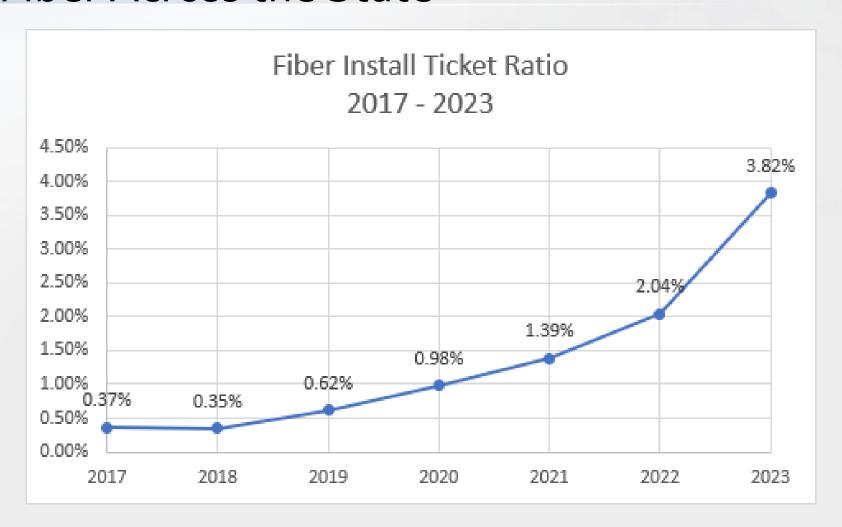


#### Fiber Across the State

year	total tickets	total FIBER tickets	FIBER ticket ratio	Responses to FIBER tickets	response rate
2017	050.000				
2017	953,066	3,493	0.37%	24,378	6.98
2018	1,324,666	4,583	0.35%	30,396	6.63
2019	1,388,684	8,582	0.62%	47,187	5.50
2020	1,505,888	14,820	0.98%	86,671	5.85
2021	1,590,840	22,088	1.39%	113,847	5.15
2022	1,537,470	31,426	2.04%	158,130	5.03
2023	415,586	15,894	3.82%	77,110	4.85

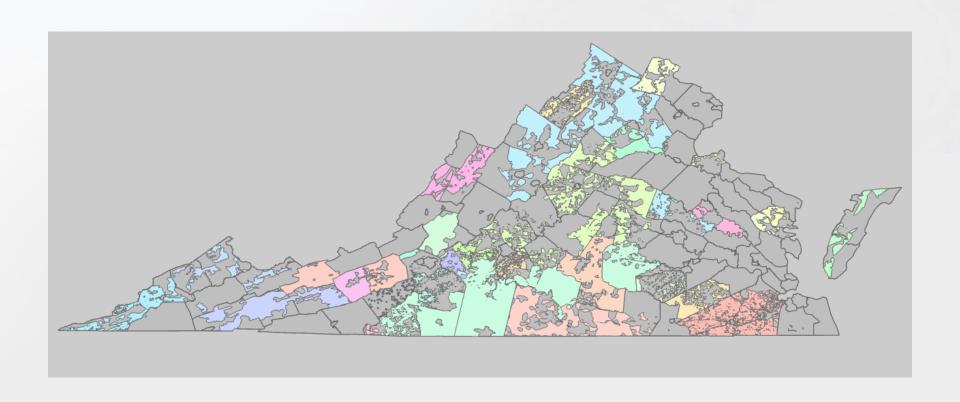


#### Fiber Across the State



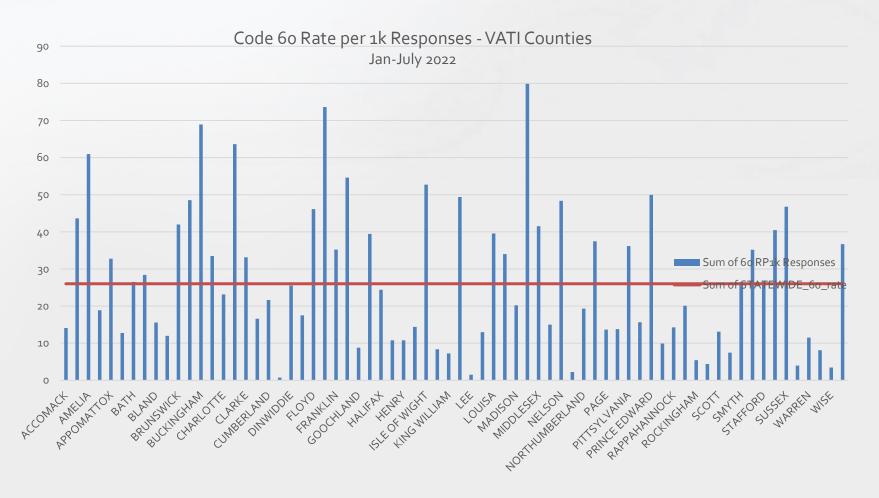


# Dec. 2021 VATI Funded Fiber Projects





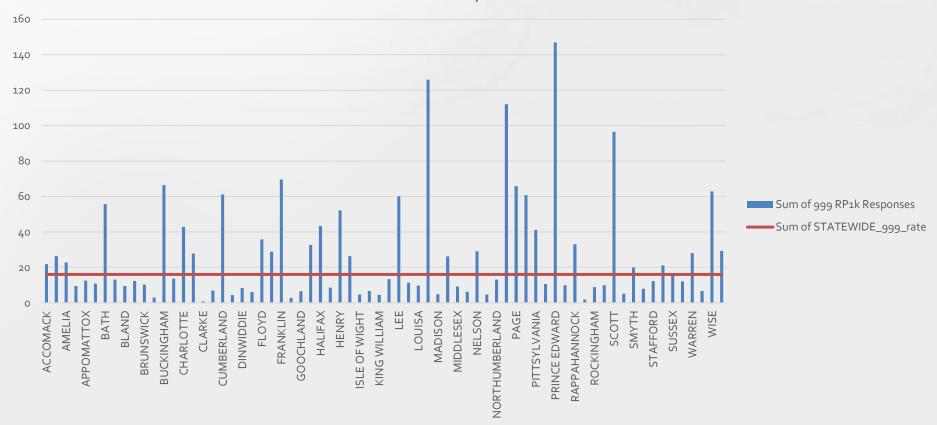
# Code 6os in VATI Counties, Jan – July 2022





# 999s in VATI Counties, Jan – July 2022

Code 999 (No Show/Late Notice) Rate per 1k Responses - VATI Counties
Jan-July 2022





Locate Request Best Practices

## Town Hall Meetings with Co-ops!

- Best Practices Guide
- Department of Housing and Community Development

#### **NEW PILOT PROJECT UNDERWAY**

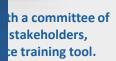
#### Helping Virginia Prepare for Increased Locates

Marcy Carroll, Virginia 811 GIS & IT Support Analyst has begun a collaboration with the Virginia Department of Housing and Community Development (DHCD) to facilitate a pilot program to examine how utilities using Virginia Telecommunication Initiative (VATI) funding to install fiber can better inform affected areas in advance. This notification process allows affected members to better prepare for the increased locates that will result from fiber expansion into their service areas.

The pilot project currently provides approximately two months advance notice to potentially affected member utilities. Map grids that overlap the broadband expansion areas and member mapping are provided to members in affected service areas. The information received and shared respects the confidentiality of network locations, but also provides member utilities with the level of detail needed to

plan for the anticipated increased excavation projects.

While this first notification is part of a pilot project, the hope is that Virginia 811 will be able to continue working with DHCD and broadband providers to facilitate ongoing notification to our members across the entire state.







If you have questions about VATI or DHCD, please visit https://www.dhcd.virginia.gov/vati. You may also contact the VATI Team at vati@dhcd.virginia.gov.



#### Taskforce 2022

- Special Project Tickets (July 1)
- 1/3 Mile Ticket Scope (July 1)
- Schedule Tickets (January 1, 2024)



#### Ticket Price Increase

- Board Approved:
  - July 1, 2023 .05 cent increase (\$1.05 \$1.10)
  - January 1, 2024 .05 cent increase (\$1.10 \$1.15)
  - January 1, 2025 POSSIBLE .05 cent increase (\$1.15 \$1.20)



#### Remote Virginia 811

- Roughly 95% of the Team works 100% Remotely
- Cloud-Based Five9
- Office@Hand
- Geographic Diversity
- Generator Team
- Drills
- Cybersecurity
  - Ninjio
  - Department of Homeland Security
- FirstNet



#### Ticket Channels

- Telephone
  - Tickets processed by Damage Prevention Specialists (DPS)
- Web Ticket Entry (WTE)
  - Tickets processed by trained professional excavators
- Single Address Ticket (SAT) 1.0
  - Older version of web app for single address tickets that allows users (homeowners and contractors) to initiate a ticket which then goes into a queue for processing by DPS team members
- SAT 2.0
  - Latest version of web app for single address tickets that allows users to fully process tickets with no DPS involvement
- Ticket Revision Express (TRE)
  - Web app used for updating, remarking, or cancelling tickets that include an email address



Telephone (DPS) & Web

ticket entry

Both users create tickets using the same Ticket Entry software, which involves data entry and mapping (to determine which utility members should be notified)





#### Ticket Volume





#### QA/QC

- WTE tickets are reviewed for quality
- Throughout the day, team members collectively audit at least one ticket (minimum of 5%) for all WTE users
  - We typically see approx. 30% of WTE tickets audited each month
- Errors that are identified are handled by Web Ticket
   Quality Coordinators who reach out to users to correct
   errors that could lead to safety concerns
- There are more than 1,000 unique WTE users monthly, approx. 40% of whom have errors on tickets



### PHMSA Grant and VT Project

In 2019, VA811 applied for and was awarded grant funding by PHMSA (Pipeline & Hazardous Materials Safety Administration) to work with Virginia Tech on a project to develop a machine learning model for estimating probability of error on WTE tickets

A pilot of the first iteration of the model showed great potential,
 suggesting VA811 could increase the number of ticketing errors identified

through use of the model

In 2021, VA811 applied for another grant and received funding once again from PHMSA to address challenges with the model and increase its predictive power by adding GIS features

In late 2022, VA811 began working with a developer to build a web app that will integrate with model code, in order to operationalize

the model

ETA on implementation is Spring 2023



The new *VArifAI* (pronounced "verify") app will allow VA811 to review WTE tickets predicted to have a higher probability of error. This is possible through the integration of a complex machine learning algorithm with VA811 systems and a new web app.

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#### **VArifai**

- The predictive model, known as a Gradient Boosting Machines model, will score 100% of WTE tickets with model code executing every 30 minutes
- Model output includes a probability score between o-1 for each ticket
- Tickets that score > 0.04 are classified as predicted "bad" tickets
  - 100% of these tickets will be added to the VArifAI list for human review
- Tickets that score <= 0.04 are classified as predicted "good" tickets
  - A subset of approx. 10% of these tickets are also added to the VArifAI list for human review, in order to address potential false negatives

# ChatGPT

#### **OpenAl's Natural Language Generator Chatbot**

The following essay was written entirely by ChatGPT, a natural language generator chatbot developed by OpenAI.

The prompt to which ChatGPT responded was "Write an essay on how artificial intelligence can help improve quality assurance and quality control in the safety industry."

The following is ChatGPT's response.



Artificial intelligence (Al) has the potential to significantly improve quality assurance and quality control in the safety industry. Quality assurance and quality control are critical processes that ensure that products, services, and equipment meet safety standards and perform as intended. By incorporating Al into these processes, companies can improve the speed, accuracy, and efficiency of their quality control efforts.

One way that AI can improve quality assurance and quality control in the safety industry is by automating the inspection of equipment and products. For example, using computer vision and image recognition, an AI system can be trained to identify defects and inconsistencies in manufactured goods, such as

cracks or inconsistencies in the size of a product. This eliminates the need for human inspection, which can be time-consuming and prone to error, and it also allows companies to detect defects at an early stage, which can save time and money.

Another way that AI can improve quality control in the safety industry is by monitoring equipment and systems for signs of wear and tear. For example, using predictive maintenance, an AI system can analyze sensor data from equipment, such as temperature and vibration, to detect signs of a malfunction. This allows companies to perform maintenance on equipment before it fails, reducing downtime and the risk of accidents.

Al can also be used to improve the safety of products by analyzing data from safety testing. For example, in the Automotive industry, Al can analyze data from crash test simulations, providing valuable insights into how a vehicle would perform in a real-world crash. This allows manufacturers to identify design flaws and make improvements, making vehicles safer for consumers.

Additionally, AI can be used to analyze data from previous accidents and incidents to identify patterns and trends. This information can be used to improve safety protocols and procedures, reducing the risk of future accidents.

In conclusion, artificial intelligence has the potential to revolutionize quality assurance and quality control in the safety industry. By automating inspections, monitoring equipment, analyzing safety test data and previous incidents, companies can improve the speed, accuracy, and efficiency of their quality control efforts, and most importantly enhance safety in the products and services they offer.



## Our Newest Guest Writer – and Guest Illustrator!









Home

Contact Us

Log In



#### Web Ticket Entry Course

Learn how to process your own ticket through the Web Ticket Entry platform. In addition, you will understand that the purpose of a ticket is to protect lives, property, and underground utility lines.

**Start Today** 











Home

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#### Re-mark and Update Course

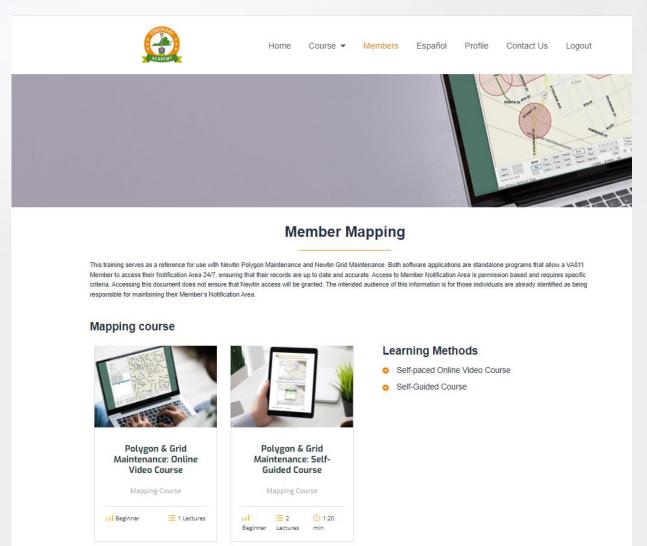
Learn when and how to complete an Update or Remark ticket on an existing Normal, Update or Remark ticket that you originally processed.

**Start Today** 





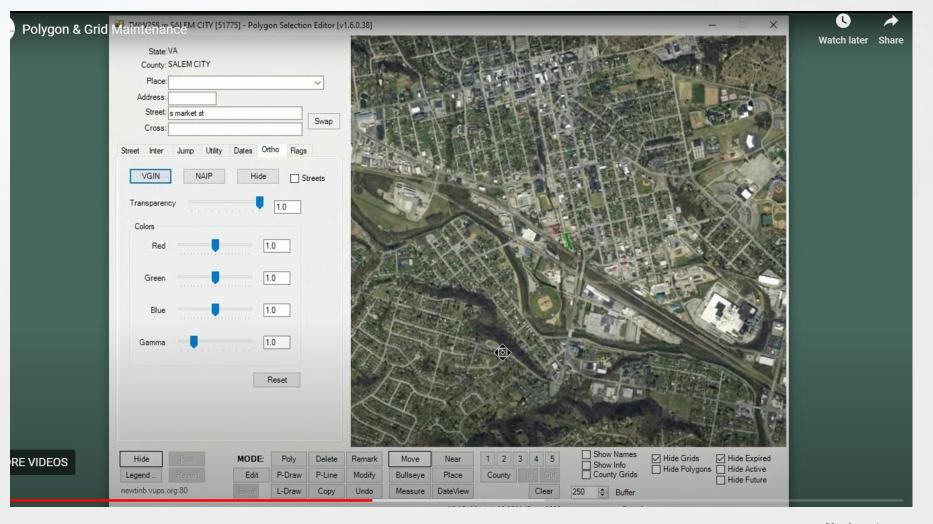










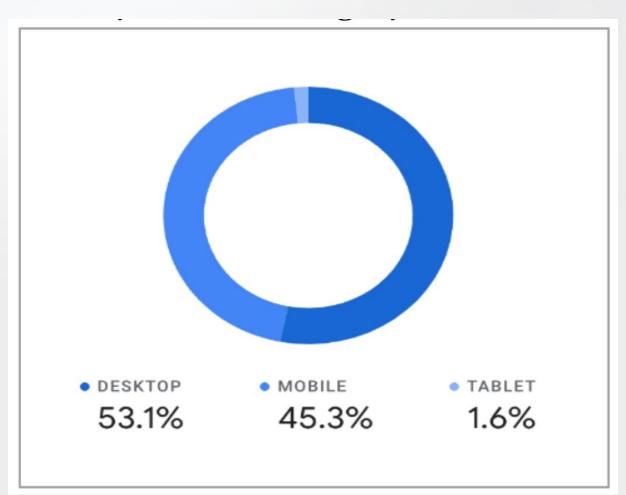








# Virginia 811 Website





## Virginia 811 Website 2022

Page title and screen class + +	↓ Views	Users	Views per user	Average engagement	Event count
			*****	time	
	595,848	122,027	4.88	1m 11s	154,276
	100% of total	100% of total	Avg 0%	Avg 0%	8.7% of total
1 Home - VA 811	189,806	68,281	2.78	0m 33s	28,411
2 Ticket Search - VA 811	103,057	29,873	3.45	0m 23s	2,703
3 Single Address Tickets - VA 811	92,878	41,524	2.24	0m 37s	79,349
4 Tickets - VA 811	33,048	12,795	2.58	0m 28s	1,433
5 Check Status - VA 811	23,141	10,922	2.12	0m 25s	3,872
6 Ticket Revision Express (TRE) - VA 811	22,318	5,195	4.30	0m 48s	299
7 Location Enhanced Ticket Search - VA 811	18,952	6,872	2.76	0m 20s	14,467
8 What Markings Mean - VA 811	13,117	10,545	1.24	0m 36s	359
9 Utilities - VA 811	12,426	3,496	3.55	0m 37s	6,221
10 Homeowners - VA 811	10,698	8,365	1.28	0m 38s	3,527

- Single Address Tickets!
- LETS!
- Looping Effect?
- Content?
- Organic vs. Paid Digital



# Marketing Impressions 2022

5,184,659	Streaming OTT/CTV - Effectv		
2,915,140	Social Media - Cox Media		
228,720	TV Everywhere - Cox Media		
362,186	Audience Extension Video - Cox Media		
796,626	Audience Extension Display Ads - Cox Media		
143,526	SEM - Cox Media		
43,788	Geofencing - Cox Media		
19,963,848	Billboards - Lamar Advertising		
29,638,493			



# Marketing Impressions 2022



- Hopewell
- Petersburg (2)
- Chesterfield (4)
- Martinsville (2)
- Salem
- Roanoke
- Bedford
- Botetourt
- Covington
- Alleghany



### Marketing Impressions 2022

# Virginia 811 Partners to Sponsor NASCAR Event



Virginia 811 partnered with 11 other 811's at Martinsville Speedway on Friday, April 8, 2022 to sponsor the "Call 811 Before You Dig 250 Powered by Call811.com" title race. Scott Crawford, President/CEO of Virginia 811 and Louis Panzer, Executive Director of North Carolina acted as Grand Marshalls for the event.



Grand Marshalls Scott Crawford & Louis Panzer Kick Off the Race



























Confidential



## Continued Support





## Stakeholder Engagement 2022

# Virginia 811 Outreach

TO SPANISH-SPEAKING STAKEHOLDERS

Important safe digging messaging should be easily accessible to everyone who works near underground utility lines, regardless of the language they speak. This means that without the proper training, Spanish-speaking workers for the many construction and excavation companies across Virginia may have limited access to important safe digging practice information.



Fernando Mendez Northern VA fmendez@va811.com

**Fernando Mendez**, Virginia 811 Regional Marketing Liaison, is leading Virginia 811's efforts to train Spanish-speaking stakeholders about the importance of damage prevention.

If you need 811 safe digging training in Spanish, please contact Fernando Mendez at (202) 336-4867 or by email at fmendez@va811.com to schedule a 30-minute onsite training session.

MANTEN A VIRGINIA SEGURO. Sepa lo que hay debajo.





# Virginia 811 Public Awareness Efforts

**Education, Training, Community, and Display Truck Events** 

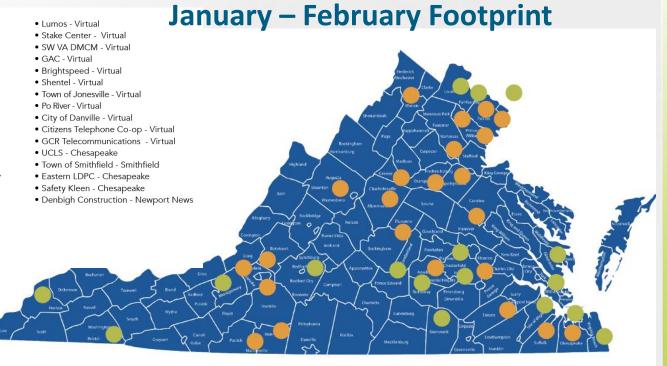
1312 Individuals Trained (YTD)





# Va Sil Com Dig With @ 1 3 2

- Southside Community College Alberta
- Southside Community College Blackstone
- Vaught's Landscaping Richmond
- Eastcom Associates Chester
- Shentel Williamsburg
- City of Norfolk Norfolk
- DC Water Virtual
- GAC Farmville
- Town of Vienna Vienna
- Fay Southeast, S&B USA Construction Salisbury
- Eastcom Associates Lorton
- Lamberts Cable Splicing Lynchburg City
- Lamberts Cable Splicing Wise County
- Lamberts Cable Splicing Montgomery County
- Atmos Energy Bristol
- Virginia Beach Public Utilities Virginia Beach
- City of Hampton Hampton
- VRWA Wise County
- VA Peninsula Community College Hampton
- Rappahannock Community College Glenns
- TCC Norfolk





#### **April Rental Equipment, Landscape, and Fencing Visits**



Distributed to equipment rental facilities throughout Virginia







- In its third year, the Virginia 811 Scholarship Program awards two (2), one-year, \$1,500 college scholarships to Virginia students planning to attend an accredited community college, trade school or four-year college or university by the following fall.
- This year, in response to a shortage in craft positions across the Commonwealth, Virginia 811 has **extended the student status requirements to** include adult learners.
- Virginia 811 is working with the Virginia Community College System (VCCS) this year to include the National Center for Construction Education and Research (NCCER) workforce curriculum program students and adult learners.
- Applications must be received by 5 PM Thursday, June 15, 2023.
- Please visit https://va811.com/ scholarship-program/ for more details.



# Stakeholder Engagement





#### Questions?